## System and Method for Examining, Recording and Analysing Dermatological Conditions

### Abstract of the Disclosure

A system for collecting, storing and displaying dermatological images for the
10    purpose of monitoring and diagnosis of skin conditions and skin cancers, including
melanoma.  A hand-held unit illuminates a section of the patient's skin, and an imaging
device generates imaging signals from light derived from a skin section.  Pairs of light output
ports in the hand-held unit are arranged such that their intensity distributions overlap at their
half-intensity levels so that the resulting summation of their intensities has a flat central
region.  Three image stores are maintained, one for lesion images, one for "nearby skin"
images, and one for reference-white images.  The "nearby skin" images are used by the
system software to automatically determine the skin/lesion border.  The reference white
images are used to set the dynamic range of the instrument and to compensate for lighting
irregularities.  Two images of the same lesion taken at different times may be displayed
20    simultaneously so that changes in the lesion may be determined.  The calibration system is
designed so that image data taken on any of multiple machines built to the same
specification will be corrected back to a common reference standard to ensure absolute
accuracy in colour rendition.